

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed December 2, 2003. To clarify various aspects of inventive subject matter, Applicants amend Claims 1, 42, 64, 87, 128, 130, and 132. To advance prosecution of this application, Applicants have responded to each notation by the Examiner. Applicants submit that all of the pending claims are in a condition of allowance. Applicants respectfully request reconsideration, further examination, and favorable action in this case.

**Claims 1-137 Rejected under 35 U.S.C. § 102**

The Examiner rejects Claims 1-137 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,624,927 B1 by Wong et al. ("*Wong*"). Applicants respectfully traverse these claim rejections for the reasons discussed below.

**a. Claims 1-127 are patentable over *Wong***

Among other features, amended independent Claim 1 recites, in part, "a gain medium operable to receive a plurality of signals and one or more pump signals, and to facilitate amplification of at least some of the plurality of pump signals, each of the plurality of signals comprising a center wavelength." Amended independent Claim 1 also recites that "launch powers of the plurality of signals primarily decrease with increasing center wavelengths of the plurality of signals."

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. § 2131. In addition, "[t]he elements *must* be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 U.S.P.Q. 2d 1566 (Fed. Cir. 1990); M.P.E.P. § 2131 (emphasis added).

*Wong* fails to teach or suggest a number of elements of amended Claim 1. For example, nowhere does *Wong* contemplate a plurality of optical signals where the launch powers of the plurality of signals decrease with increasing center wavelength. The *Wong* disclosure describes a Raman amplifier where the pump power from a first pump wavelength produces Raman gain for a second pump wavelength that is used to amplify optical signals communicated over a

transmission line. *See Abstract; see also Col. 4, Lines 12-28.* To the extent that *Wong* discusses changing launch powers, this discussion is limited to the launch powers associated with pump signals launched into transmission fiber spans. *See Abstract; Figure 2.* Consequently, *Wong* fails to teach or suggest an optical amplifier where the "launch powers of the plurality of signals primarily decrease with increasing center wavelengths of the plurality of signals."

Applicants submit that independent Claims 43, 64, 87, 109, and 119 are patentable over *Wong* for at least the reasons discussed above. Thus, Applicants respectfully request withdrawal of the rejection and full allowance of Claims 43, 64, 87, 109, and 119, and all claims depending therefrom.

**b. Claims 128-137 are patentable over *Wong***

Among other features, amended independent Claim 128 recites, in part, "a gain medium operable to receive a plurality of signals and one or more pump signals, each of the plurality of signals comprising a center wavelength, at least some of the plurality of signals associated with a first signal to noise ratio measured at an output coupled to the gain medium." In addition, Claim 128 recites that "a sum of the launch powers of the plurality of signals comprises a lower total power than would result from all of the plurality of signals being launched at the same launch power sufficient for each of the plurality of signals to obtain at least the first signal to noise ratio at the output."

*Wong* fails to teach or suggest a number of elements of amended Claim 128. For example, nowhere does *Wong* contemplate a plurality of optical signals where the sum of the launch powers of the plurality of signals comprises a lower total power than would result from all of the plurality of signals being launched at the same launch power sufficient for each of the plurality of signals to obtain at least the first signal to noise ratio at the output. To the extent that *Wong* discusses launch powers, this discussion is limited to the launch powers associated with pump signals launched into transmission fiber spans. *See Abstract; Figure 2.* Consequently, *Wong* fails to teach or suggest an optical amplifier where "a sum of the launch powers of the plurality of signals comprises a lower total power than would result from all of the plurality of signals being launched at the same launch power sufficient for each of the plurality of signals to obtain at least the first signal to noise ratio at the output."

Applicants submit that independent Claims 130, 132, 134, and 136 are patentable over *Wong* for at least the reasons discussed above. Thus, Applicants respectfully request withdrawal of the rejection and full allowance of Claims 130, 132, 134, and 136 , and all claims depending therefrom.

**Information Disclosure Statements**

In the Applicants' previous Response, Applicants requested that the Examiner confirm in his next communication that he had received and considered both of Applicants' Information Disclosure Statements which were filed September 24, 2002 and May 1, 2003 in this Application. Applicants are again respectfully requesting the Examiner, at his convenience, confirm in his next written communication that the Examiner has considered both of Applicants' Information Disclosure Statements.

**CONCLUSION**

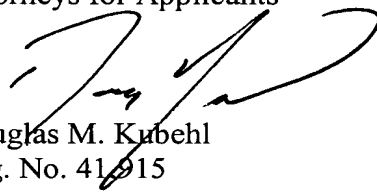
Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of all pending Claims.

Applicants do not believe that any fees are due. However, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

If the Examiner feels that a conference would advance prosecution of this Application in any manner, Douglas M. Kubehl stands willing to conduct such a telephone interview at the convenience of the Examiner. Mr. Kubehl may be reached at 214-953-6486.

Respectfully submitted,

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